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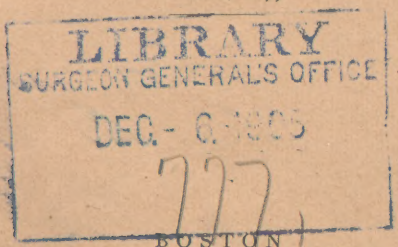

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ABDOMINAL HYSTERECTOMY FOR CANCER OF THE CERVIX.

BY J. C. IRISH, M.D., LOWELL, MASS.

THE relative advantages of abdominal and vaginal hysterectomy for diseases within the pelvis in general, and cancer of the uterus in particular, have already been so exhaustively discussed and argued that very little is left to be said upon that subject. Still I cannot refrain from saying a few words in regard to this question of choice of operation.

I believe that in all cases of cancer at the os the operation chosen should be abdominal hysterectomy. Entirely apart from the relative difficulties of the two operations, and the fact that vaginal hysterectomy is an operation of accident, such as injury of the bladder, intestines, and notably of the ureters (the latter occurring so often that it has given rise to a new abdominal operation, namely, one for implanting an injured ureter in the bladder) — aside from all these reasons that can be deduced in favor of abdominal hysterectomy, there is still another, of far greater importance, that my own clinical experience with the abdominal operation has, in my mind, very firmly established, and that is the direction of extension of malignant disease from the os. In a series of twenty-five abdominal sections for cancer of the cervix I have found extension of infection in four cases out towards the pelvic wall, and a mass of infected cancerous tissue, probably glandular in its character, which was found not far from the internal iliac artery and very near the point where the

uterine artery crosses the ureter. I have found this extension of disease on one side only, usually, and while in other cases, more advanced, there has been invasion of the structures under the broad ligaments above, still in these four cases there was no other extension of the disease. Furthermore, by any vaginal examination it was utterly impossible to locate or know of this extension. No such examination could possibly reveal its existence. These were cases that apparently had come for operation fairly early in the course of the disease. Besides, too, they would have been regarded as instances perfectly suitable for the vaginal operation, and had that been done the existence of this infection outside of the uterus would never have been known. The operation would have been completed without the least suspicion that the entire infected structures had not been removed, and if by any chance the diseased tissue outside of the uterus had been known to exist, in doing the vaginal operation it would have been utterly impossible to remove it; while by the abdominal route the complication was very readily recognized, and in every instance the diseased structures were removed without very great difficulty. That is, the abdominal operations in these four cases made a complete operation possible, instead of an incomplete one, as would have been the case had vaginal hysterectomy been done.

Twenty-five cases, of course, is a small number to afford any statistical value as to the frequency with which such extension of disease occurs, but, on the other hand, I do not know that we have any reason to doubt that the same proportion I have found may still hold good in an indefinite number of cases, and if it be true that we have an extension to those glands at the base of the broad ligament in one case out of six in the early course of the disease, that seems to me a

sufficient reason why the vaginal operation should be entirely discarded in the treatment of cancer of the cervix. In these four cases had vaginal hysterectomy been performed it would have been very analogous to removing the breast and leaving infected glands in the axilla.

When abdominal hysterectomy is done for cancer of the cervix there are some details of technique to which I wish to call your attention.

The vagina having been rendered as aseptic as possible in the preparation of the patient, as a preliminary step of the operation I amputate the neck of the uterus close to the vaginal attachment. This is done in all cases, whether the disease of the os is extensive or slight. Then, if the infection has extended along the mucous membrane above the amputation, the uterus is packed; if not, the packing of the cervical canal is unnecessary. Then a thick roll of gauze, to absorb and check any hemorrhage, is applied to the cut cervix and protrudes from the vulva. This is removed before the vagina is opened from above. This, you will note, is an entirely different procedure from the so-called combined vaginal and abdominal operation, for in the latter the vagina is separated from the cervix, and the uterine arteries are ligated. It seems to me that it may be said that this combined operation simply combines the dangers and disadvantages of vaginal hysterectomy with those that distinctively belong to the abdominal operation.

In my personal experience, this preliminary amputation of the cervix has, in several ways, seemed to be of very great advantage. In the first place, the procedure occupies but two or three minutes, and we remove much more rapidly and thoroughly any breaking-down tissue than we do by a curettement. Then by packing the cervix, if necessary, we entirely remove

all danger of infection in removing the uterus through the abdominal incision. If such a danger exists, of which I have some doubt, this entirely protects the patient from it. The great advantage, however, of this step, is in simplifying and shortening the time of the abdominal operation that is to follow. The ten or fifteen minutes required in dissecting the uterine neck is saved, and very often this separation of the neck is much the most difficult part of the operation. In those cases where the cervix has become extremely enlarged and fills the whole vagina this preliminary amputation of the neck becomes almost a necessity to render abdominal hysterectomy possible.

While the technique of abdominal hysterectomy when done for cancer of the cervix is, in the main details, that of complete hysterectomy for other conditions, still there are certain variations from the ordinary operation to be made. After the upper portion of the broad ligaments on each side, including the ovarian arteries and the round ligament, has been ligated and incised, opening each broad ligament, then the fold of vesical peritoneum containing the bladder having been cut across the anterior face of the uterus, and the bladder pushed well down below the cervix onto the vagina, we have on each side of the body of the uterus that wing of posterior peritoneum belonging to the broad ligament. This can be divided, without any ligation, close to the body of the uterus. Then the uterine arteries, with very little surrounding tissue on each side, are brought well under our fingers, above the uterine neck, near or a little below the internal os. I prefer to ligate the uterine arteries at this point, rather than attempt to do so farther away towards the pelvic walls and in close proximity to the ureter. After they are ligated on each side, it is very easy, with the fingers, to separate them from the neck of

the uterus and push them out towards the point where they cross the ureter and towards the internal iliac artery. As we separate them and push them out on each side towards the pelvis we reach that point where are located the infected glands, or cellular tissue, if there has been an extension of the infection from the cervix. When this condition is found to exist, the dissection of the diseased masses should be done at this time. In the four cases in which I found a cancerous mass in this location it has been possible to dissect it out very thoroughly from the vicinity of the ureter and the uterine and iliac arteries, and I believe in every instance it was as completely done as we are able to dissect infected glands in the axilla.

Next, completing our dissection down to the vagina on all sides (the neck having been amputated), by a somewhat forcible and steady traction upon the uterus, we can stretch the vagina well up within the pelvis. Then clasping this portion of the vagina between two fingers of the left hand, well below the uterine tissue, we can divide it almost any distance from its junction with the neck that we may choose. This is especially important when the disease has extended to the posterior vaginal wall, which occurs in quite a proportion of cases. Should one prefer to close the vault of the vagina, it should now be done by a continuous over-and-over stitch, including at the same time the vaginal arteries at the sides. In this way any troublesome hemorrhage from these arteries can be readily controlled by the stitch, without the trouble of separate ligatures. In my own operations I have always left the vaginal vault entirely open, and have rarely seen sufficient bleeding from the vaginal arteries to require a ligature. Then a roll of gauze is carried from the abdomen out through the vagina, the upper end of it slightly protruding in the pelvis just above the cut

vaginal edges. Then the peritoneal flaps, from one ligated ovarian artery across the pelvis to the other, are closely stitched by running a catgut suture. Thus there is left in the abdominal cavity no raw surface, except the two ligated ovarian arteries, and even these may be covered, in sewing the peritoneal flaps, if one should prefer to do so. On the vaginal side of this peritoneal wall there are apparently quite large raw surfaces left uncovered. From these surfaces one would expect quite a long-continued suppurative discharge from the vagina, but, as a matter of fact, this very rarely occurs. I think it very probable that the peritoneum above these raw surfaces is simply pushed down upon them and, to a very great extent, becomes agglutinated to them, so, practically, a large part of them becomes covered with peritoneum. At any rate, it is very certain that no large surface above the vaginal incision goes through the long process of healing by granulation.

In the treatment of cancer of the cervix by abdominal hysterectomy my experience from October 1, 1893, to May 1, 1898, includes twenty-five cases. This small number cannot, of course, furnish much valuable statistical information, but I have made a special effort to follow the subsequent history of the patients who have recovered from the operation up to the present time, and have been able to do so in every instance but two. Since the abdominal operation for cancer of the os is a very recent one, and has now only partially replaced the vaginal, we have, so far as I know, no long list of cases indicating the remote results that we may hope to attain. Probably they would not differ materially from those that have followed the older operation — vaginal hysterectomy. Still, if there were any difference in this respect, it must be in favor of the abdominal operation, because, as I have in-

dicated above, the entire infected tissues would be removed by the latter in a certain proportion of cases in which, by the vaginal route, the operation would be incomplete.

In three cases of the twenty-five, the operation was not completed, on account of the extent of the disease. In one of the three the tubes and ovaries were removed and the uterine arteries ligated. The bladder could not be separated from the uterine neck. The patient afterwards improved in health for several months, but died of the disease about two years after the incomplete operation. There were three deaths from the operation. In two cases of death there was extensive dissection of infected glands up to the pelvic walls. In one of them the uterine neck had been previously amputated for the cancer. In the third case the operation was a very simple and early one, but acute mania developed, of which the patient died on the seventh day after the operation. There was no indication of any difficulty in the abdominal cavity. There are left nineteen cases which recovered. Nine were operated more than three years ago and present the following history:

One operated October 19, 1893, no return of disease; one operated November 23, 1894, no return of disease; one operated January 15, 1895, no return of disease; one operated July 17, 1895, no return of disease; one operated December 30, 1895, no return of disease; that is, of the nine cases of three years, or more, ago, we have five remaining at the present time perfectly well. The history of the remaining four, in brief, is this:

One operated June 5, 1894, died two years after from return of cancer — an apparently early operation, although there was extension of the disease to the glands in the pelvis on one side.

One operated September 1, 1894, infected glands, left side of the pelvis, near the point where the uterine artery crosses the ureter; no return of the disease fifteen months after the operation. Subsequent history unknown.

One operated February 20, 1895, died about two years later, of cerebral hemorrhage. No return of the disease. This case presented a notable incident that may be worth recording, even though it be somewhat aside from the subject under consideration. The patient was sixty-six years of age and weighed about 200 pounds. She was placed in the full Trendelenburg posture and the operation was quite a long and difficult one. After she was placed in bed and recovered from the anesthetic there was apparent slight paralysis of one side and difficulty of speech. From this, however, she entirely recovered in about four weeks. This was the only instance I have ever seen in which any apparent harm has followed the use of the full Trendelenburg posture.

Number four operated July 18, 1895, died of return of the disease about three years later.

The remaining ten cases operated between January 1, 1896, and May 30, 1898, are of too recent date to be of much value as to ultimate results. Two have died from recurrence of the disease; one subsequent history not known; one died from some obscure disease of the nervous system two months after the operation; one has recurrence of the disease after eighteen months. Five cases no return of the disease.

In relation to the after-history of the above cases the accuracy of diagnosis has an important bearing. In about one-half of them the malignant character of the disease was confirmed by microscopical examination; in the remainder the diagnosis was clinical. But epithelioma of the os is as accessible and as readily

diagnosed as that of the lip, and adeno-carcinoma of the cervix is so uniform in its mode of development that there is small probability of error in determining either condition.

In a comparative study of the progress of cancer of the cervix and cancer of the breast we find, in one respect, very close analogy, as, for instance, in some cases of cancer of the breast when the tumor is extremely small and movable, and probably of very recent origin, there will be very apparent extension of the infection along the lymphatics into the axilla and below the clavicle, while in other cases the growth in the breast has existed for a long time without any appreciable extension of the disease. That is, the condition of the breast itself really gives no certain indication of the extension of the infection that may have occurred beyond it. In cancer of the cervix the same uncertainty as to the involvement of lymphatic and cellular tissue exists. In two of the cases in which I have reported extension of the disease outside of the cervix there was simply a small ulcer on the os, surrounded by hardened tissue, the whole infected surface apparently not one-half inch in diameter. Still, in these cases cellular tissue was involved under the uterine artery and well out upon the ureter, while in other cases the cervix was extensively diseased and broken down, but not attended with any involvement of the tissues beyond the uterus itself.

While in cancer of the breast it is of no great importance to estimate before the operation the extent to which the lymphatic glands are involved, because we would remove all the axillary glands in any event, in cancer of the cervix it would be of great advantage to determine whether tissue outside of the uterus itself were involved, especially if we were ever tempted to do vaginal hysterectomy; but, unfortunately, the exist-

ence or non-existence of infected glands beyond the uterus cannot be determined before the operation, unless extensively involved. Therefore, as I believe, the only operation justifiable in cancer of the cervix is abdominal hysterectomy.